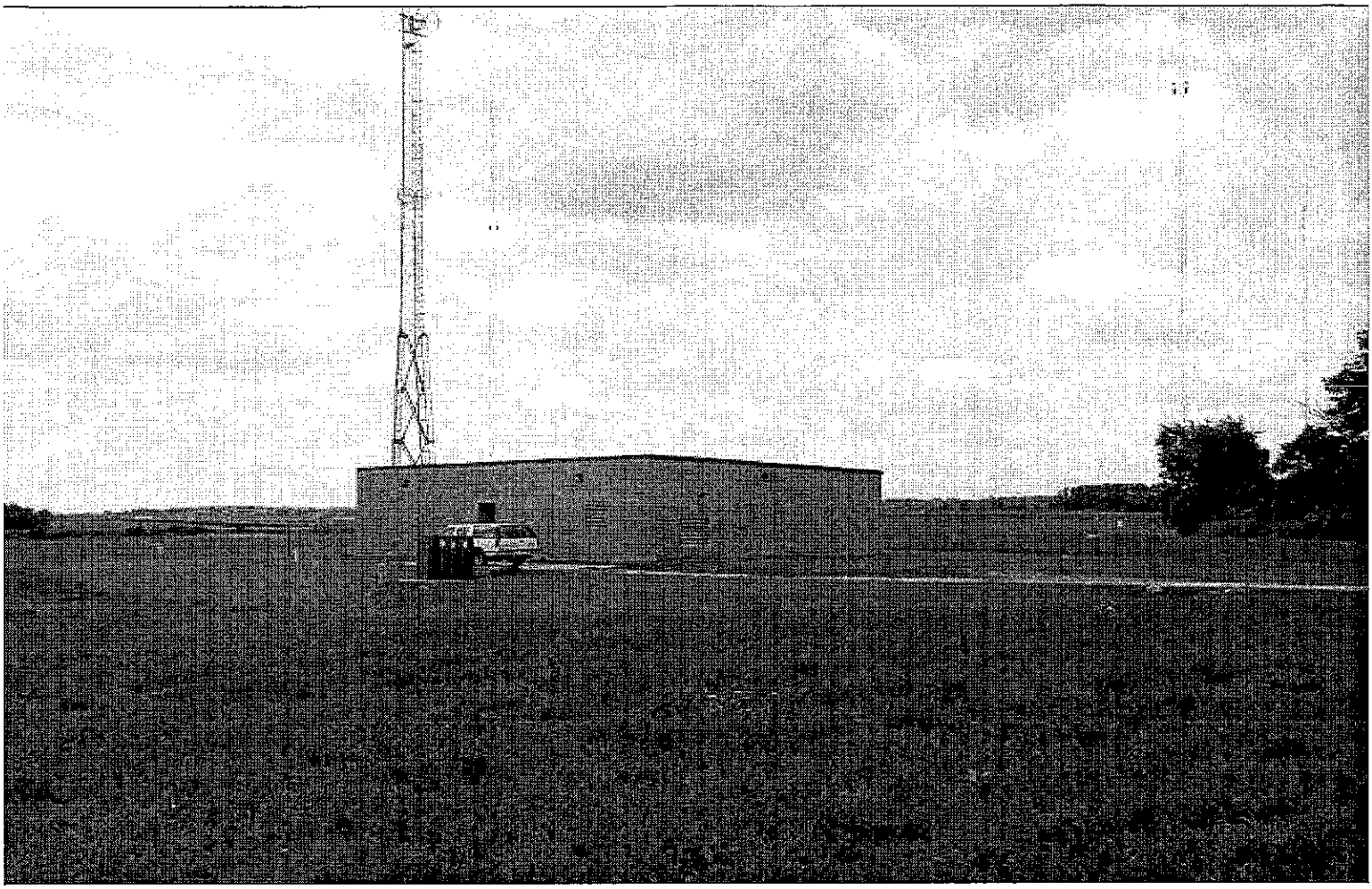

Environmental Assessment
WTMJ Transmitter Site
Racine County, Wisconsin
January 2010

FEMA

U.S. Department of Homeland Security
Department of Homeland Security
500 C Street, SW
Washington, DC 2047

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1.0 INTRODUCTION

The Federal Emergency Management Agency (FEMA) has identified several radio transmission sites throughout the United States of America (US) that provide significantly powerful signals, which can be used for communication purposes in the event of a national catastrophe. Each radio transmission site is required by FEMA to have between 30 and 60 days of auxiliary diesel fuel available to power the radio transmission site in the event of a power outage. This requires that between 6,000 and 12,500 gallons of diesel fuel be located on each radio transmission site, depending on the site requirements. To this end, FEMA has contracted with the Primary Entry Point Administrative Council, Inc. (PEPAC), a 501(c) Washington, D.C.-based non-profit corporation, in order to upgrade, maintain, and manage the auxiliary fuel systems installed and owned by FEMA at each radio transmission site throughout the US.

PEPAC is proposing to close and remove an existing 5,000-gallon diesel fuel Underground Storage Tank (UST) system and install a new 12,000-gallon diesel fuel UST system at the WTMJ transmitter site, which is located at 20101 Church Road in Union Grove, Racine County, Wisconsin (Proposed Action). In accordance with the National Environmental Policy Act (NEPA), FEMA is required to evaluate the potential environmental impacts of the Proposed Action. In compliance with NEPA (42 U.S.C. §§ 4321 *et seq.*), this EA examines the potential impacts of the Proposed Action and includes a No Action Alternative.

1.1 Project Authority

In accordance with NEPA, the Council of Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500-1508), and FEMA regulations for NEPA compliance (44 CFR Part 10), FEMA must fully understand and consider the environmental consequences of actions proposed for federal funding. The purpose of this EA is to meet FEMA's responsibilities under NEPA and to determine whether to prepare a Findings of No Significant Impact (FONSI) report or a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Proposed Action.

1.2 Project Location

The site is located at 20101 Church Road and is within the city limits of Union Grove, Racine County, Wisconsin. The site is located approximately 1.55 miles northwest of the village center of Union Grove. The site is located in the northwest quadrant of Section 19, Range 21 East, Township 3 North with an approximate latitude of 42° 42' 31.8" North and an approximate longitude of 88° 3' 53.9" West. Besides minor intermittent streams and wetland areas, the most significant water body in the site vicinity is the West Branch of the Root River Canal, which is located approximately 1.4 miles southeast of the site. The site is located approximately 15 miles west of downtown Racine, Wisconsin. The approximate site location is depicted on a relevant United States Geological Survey (USGS) 7.5-minute series topographic map that is included as Figure 1, Appendix A; and is depicted on an aerial photograph of the site provided as Figure 2, Appendix A.

1.3 Purpose and Need

An on-site UST system is required to provide emergency auxiliary power at the WTMJ transmitter site in the event of a loss of electrical power supply. The purpose of the Proposed Action presented in this EA is to upgrade the quality and capacity of the emergency auxiliary power system at the WTMJ transmitter site because FEMA has determined the WTMJ transmitter site is a necessary part of the national catastrophe support network. The existing UST system does not have modern safeguards, which increases the potential that petroleum could impact subsurface soils and groundwater. Additionally, the existing UST will be upgraded to a larger capacity UST. The upgrading activities are needed to minimize the potential of impact to the human and natural environment from a potential petroleum product release. The Proposed Action is not being considered in response to a known UST leak or a historic release of petroleum products from the existing UST system.

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental impacts. This EA was prepared in accordance with FEMA's regulations as required under NEPA. As part of this NEPA review, the requirements of other environmental laws and Executive Orders (EO) are addressed.

1.4 Existing Facility

The existing UST system includes one single-walled, fiberglass reinforced plastic (FRP), 5,000-gallon UST located northwest of the WTMJ transmitter building. The existing UST system was reportedly manufactured by Xerxes Corporation and installed in 1994. The existing UST system is equipped with an Auto Stik Jr. automatic tank gauging leak detection system. Leak detection observations are performed every Monday. The existing UST system provides diesel fuel to a 50-gallon day tank located in the generator room of the WTMJ transmitter building. The day tank is reportedly a single-walled, steel Aboveground Storage Tank (AST), manufactured by Tramont (model number: UTRS-50). The day tank is supplied via a supply pipe from the existing UST to a day tank transfer pump, and has one return pipe back to the existing UST. Existing underground piping is single-walled and constructed of FRP, while existing aboveground piping is single-walled carbon steel and flexible hoses. There is no leak detection system in place for the existing UST system's underground and aboveground piping. There is no fuel filtration system associated with this existing UST system.

2.0 ALTERNATIVES ANALYSIS

According to NEPA protocol, PEPAC and FEMA are required to provide alternatives to the Proposed Action. FEMA has selected the WTMJ transmitter site based on the prime location and signal strength it provides; therefore, other radio transmitter sites in the vicinity were not considered as action alternatives in this EA. Alternative locations within the WTMJ transmitter site to install the upgraded UST system were considered but dismissed as non-viable, as the new UST system must be located in the vicinity of the WTMJ transmitter building for logistical purposes. The upgraded UST system installation location, running parallel to the west wall of the main WTMJ transmitter building, was selected as the preferred alternative based on its proximity to existing

equipment infrastructure and the greater availability of space to accommodate the larger UST. The Proposed Action does not require new land to be added to the WTMJ transmitter site. A new UST system was selected in lieu of a new AST system primarily for security reasons. The WTMJ facility is primarily unoccupied and an AST system would be more vulnerable to security issues than a new UST system. No Action Alternatives were considered as part of this EA.

2.1 Proposed Action

Under the Proposed Action, PEPAC proposes to upgrade the existing UST with a new 12,000-gallon, double-walled UST with automatic tank monitoring and leak protection equipment. The Proposed Action calls for replacement of the ancillary fuel system (piping, valves, day tank, and other ancillary equipment). Additionally, the Proposed Action includes curbing and sealing of concrete floors, joints, and walls below and around the proposed day tank in the generator room of the WTMJ transmitter building.

The centerline of the new UST will be oriented on a north-south axis, perpendicular to the existing UST, which is orientated on an east-west axis. The new UST will be approximately 10-12 feet below ground surface (bgs). The location of the new UST will be designed to provide access for fuel tank truck delivery and UST filling operations. The new day tank and fuel filtration equipment will be located inside the generator room of the WTMJ transmitter building. The UST tank monitoring and leak detection equipment will be located in the WTMJ transmitter building as well. Underground piping which will connect the new UST and the day tank will be located approximately four feet bgs. The ground disturbance anticipated to be necessary for the installation of the Proposed Action will total approximately 4,000 square feet (sq. ft.), which includes the UST basin and associated pipe trenches.

Equipment necessary to complete the Proposed Action includes backhoes, compactors, trailers, cranes, and associated support vehicles, which will be staged in the vicinity of the WTMJ transmitter building.

The Proposed Action requires that the existing UST (approximately 13 feet bgs), day tank, and piping be decommissioned, closed and removed in accordance with federal, state, and local requirements.

2.2 No Action Alternative

Under the No Action Alternative, the existing UST system would not be upgraded. Risks to human health and safety associated with potential releases associated with the existing UST system because of aging and outdated equipment would not be mitigated. Additionally, if the UST system is not upgraded, enhancements to the national communication system would not be completed.

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 Physical Environment

3.1.1 Geology, Seismicity, and Soils

The site is located at 20101 Church Road within the city limits of Union Grove, Racine County, Wisconsin. The site is located in the northwest quadrant of Section 19, Range 21 East, Township 3 North.

According to the Bedrock Geology of Wisconsin Map (University of Wisconsin, dated 1981 and revised in 2005), the site vicinity consists of Silurian-aged formations, which are comprised primarily of dolomite.

Historically, seismic risk for the site and site vicinity is low. At the issuance of this report, the most recent earthquake recorded in the State of Wisconsin was on December 13, 2008, approximately 40 miles north-northwest of the site (3.8 in magnitude). The largest earthquake recorded in the State of Wisconsin was in Milwaukee County, centered approximately 30 miles northeast of the site, which registered an Intensity V earthquake (unknown magnitude) on May 6, 1947 (http://earthquake.usgs.gov/regional/states /state_largest.php). In order to qualify for funding assistance from FEMA, EO 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction,* must be followed. However, existing building codes and state requirements and standards will address and/or mitigate the minor seismic risk associated with the Proposed Action.

A review of "Soil Map – Kenosha and Racine Counties, Wisconsin" (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) indicates the site is comprised of Elliott silty clay loam (EtB). The Elliott series consists of very deep, somewhat poorly drained soils on till plains. The Elliott series is formed in up to 20 inches of loess or other silty materials and in the underlying silty clay loam till. Slope ranges from 0 to 7 percent. In this type of soil, the depth to water table can reportedly be 1.0 to 2.0 feet bgs.

Discussion of Alternatives

Proposed Action

Short term impacts to site soils would occur during the construction phase of the Proposed Action. The Proposed Action requires that the area for the installation of the new UST (approximately 4,000 sq. ft.) be excavated to approximately 10-12 feet bgs. These short-term impacts would be mitigated using Best Management Practices (BMPs), which would include the stockpiling and covering of excavated soil on-site to help prevent fugitive dust and/or soil erosion. A concrete pad will be installed above the UST at ground surface. A concrete pad is necessary for protection of the new UST system and to counteract buoyancy forces acting on the UST. Upon completion of the construction activities, disturbed areas outside of the concrete pad would be revegetated

to prevent soil erosion. A Tank System Site Assessment (TSSA) will be performed in accordance with Wisconsin Department of Commerce (WDOC) Chapter COMM 10 requirements. A TSSA includes sampling of native soils after the removal of the old UST system and excavation of contaminated soils/backfill if encountered.

The Farmland Protection Policy Act (FPPA) (P.L. 97-98, Sec. 1539-1549; U.S.C. 4201, et seq.), which states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses," was considered in this EA. The WTMJ transmitter site has already been developed and the Proposed Action would not entail the conversion of farmland.

No Action Alternative

Under the No Action Alternative, the short-term impacts to the site soil during the construction phase of the Proposed Action would be avoided.

3.1.2 Water Resources and Water Quality

During a site visit on August 11, 2009, no surface waters were observed in the vicinity of the Proposed Action. According to the relevant USGS 7.5-minute series topographic map, stormwater runoff on-site generally slopes to the south toward minor intermittent streams and wetland areas, which then eventually flow into the West Branch of the Root River Canal, located approximately 1.4 miles southeast of the site.

According to the "2008 Consumer Confidence Report for 25202001 Union Grove Waterworks" (CCR), the Village of Union Grove provides drinking water to its residents from a series of groundwater wells, only one of which is currently active, which range from approximately 205 feet bgs to 1,504 feet bgs. These groundwater wells extract groundwater from the Eastern Dolomite bedrock aquifer system. Sampling activities of this water source by the Village of Union Grove reportedly did not observe contamination at concentrations that would violate federal drinking water standards, with the exception of gross alpha radiation particles (excluding Radium and Uranium). Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. The USEPA indicates that the maximum contaminant level (MCL) for gross alpha radiation particles is 15 picoCuries per liter (pCi/L). The CCR indicated gross alpha radiation particle levels of 18.4 pCi/L detected during sampling analysis. However, the Proposed Action will not require the use of groundwater to operate or complete.

Discussion of Alternatives

Proposed Action

The Proposed Action would provide a net benefit to the watershed in the vicinity by upgrading the existing UST system. The existing UST and ancillary equipment has the potential to leak and release petroleum products into the subsurface soils and groundwater. Installing a new UST system with automatic leak detection equipment would reduce the potential for petroleum leakage into the nearby environment.

No Action Alternative

Under the No Action Alternative, potential impacts to the subsurface soils and groundwater in the site vicinity could occur due to leakage or release of petroleum from the outdated and aging UST and ancillary equipment. The current underground piping

system is not double-walled and does not have a leak detection system, which increases the potential that impacts to the nearby subsurface soils and groundwater could occur.

3.1.3 Floodplain Management

According to the FEMA Flood Insurance Rate Map (FIRM), Community Panel Number 550347 0065 B, dated April 1, 1982, the site is located in Flood Zone C, which is not within the 100-year floodplain. Therefore, a discussion of floodplain mitigation measures needed for the Proposed Action is not warranted.

Discussion of Alternatives

Proposed Action

A discussion of floodplain mitigation measures needed for the Proposed Action is not warranted at this time because the Proposed Action is located within Flood Zone C.

No Action Alternative

Under the No Action Alternative, floodplain mitigation measures are unnecessary at the site because of the Proposed Action's location within Flood Zone C.

3.1.4 Air Quality

The Clean Air Act requires the United States Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards: primary standards, which set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; and secondary standards, which set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation and buildings. Current USEPA criteria pollutants are: Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Ozone (O_3), Lead (Pb), Particulate Matter (PM), and Sulfur Dioxide (SO_2).

According to the 2008 USEPA Air Quality Index Chart for Racine County (AQI), criteria pollutants were measured 187 days of the year by the Wisconsin Department of Natural Resources (WDNR). Of the 187 days measured, 173 days were ranked as having "Good" air quality and the remaining 14 days were ranked as having "Moderate" air quality. Of the 187 days in which measurements were taken, no days were ranked as "Unhealthy for Sensitive Groups" or "Unhealthy". According to the AQI, the primary criteria pollutant that compromised air quality was O_3.

Discussion of Alternatives

Proposed Action

The Proposed Action entails the emission of air pollutants into the atmosphere during construction activities and when the emergency auxiliary equipment is running. Construction equipment that burns petroleum products will be used to excavate and fill the existing UST basin and piping areas. Emissions from fuel-burning internal combustion engines (e.g. heavy equipment and earth moving machinery) could temporarily increase the levels of some pollutants, including CO, Volatile Organic Compounds (VOCs), NO_2, O_3, and PM; these increases would be temporary. To reduce

the emission of USEPA criteria pollutants, fuel-burning equipment run times would be kept to a minimum. The new UST system would be used only as an emergency auxiliary power source.

An additional short term effect from the construction activities required for the Proposed Action involves the potential for the release of fugitive dust from excavated soil. To reduce the potential temporary impacts to air quality from fugitive dust, the site should be watered down in areas of construction when necessary.

No Action Alternative

Under the No Action Alternative, air quality at the site would not be affected. The short-term impacts to the air quality from the construction phase of the Proposed Action would be avoided.

3.2 Biological Environment

3.2.1 Terrestrial and Aquatic Environment

The WTMJ transmitter site is currently used as a radio transmitter site and includes several radio towers and several buildings. The Proposed Action is located in an area within the WTMJ transmitter site that was previously vacant land. The site is currently surrounded in all directions by vacant land. During a site visit on August 11, 2009, the site was observed to be vegetated with native grasses and weeds. No evidence of wetland habitat, streams, ponds or other aquatic environments was identified in the site vicinity during the August 11, 2009 site visit.

Discussion of Alternatives

Proposed Action

The Proposed Action would not appear to create a significant effect to the existing terrestrial environment. The new UST and ancillary equipment will be buried; however, the extent of ground disturbance would be minimal because of the limited nature of the Proposed Action. The new UST system will be placed in close proximity to the existing UST system, on an area of land that was likely previously disturbed during initial development of the WTMJ transmitter site.

No Action Alternative

Under the No Action Alternative, the existing terrestrial environment on-site would not be affected.

3.2.2 Wetlands (EO 11990)

Under the Clean Water Act (40 CFR § 230.3), wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." Potential wetlands under the jurisdiction of the US Army Corps of Engineers (USACE) include waterways, lakes, streams, and natural springs. EO 11990, *Protection of Wetlands*, requires federal agencies to take action to minimize the loss of wetlands. The NEPA compliance process requires

federal agencies to consider direct and indirect impacts to wetlands, which may result from federally funded actions.

A review of the US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map available online (http://www.fws.gov/wetlands/). A review of the USFWS NWI map indicated that wetlands have not been mapped by the USFWS in the State of Wisconsin. Due to this fact, the WNDR Surface Water Online Data Viewer (http://dnrmaps.wisconsin.gov /imf/imf.jsp?site=SurfaceWaterViewer.wetlands). A review of the Surface Water Online Data Viewer indicated that wetlands are not present at or in the vicinity of the Proposed Action. According to the WDNR Surface Water Online Data Viewer, the closest identified wetlands were two separate areas located approximately 400 feet to the north and 400 feet to the west, respectively, of the Proposed Action.

As shown on the relevant USGS 7.5-minute series topographic map, the Proposed Action is not located at or adjacent to surface waters. During an August 11, 2009 site visit, no evidence of potential wetlands, hydric soils, or hydrophytic vegetation at or in the vicinity of the Proposed Action was observed. Furthermore, a review of the relevant soil survey map "Soil Map – Kenosha and Racine Counties, Wisconsin" (http://websoilsurvey.nrcs. usda.gov/app/WebSoilSurvey.aspx), did not note hydric soils at or in the vicinity of the Proposed Action.

The absence of wetlands habitat at or in the vicinity of the Proposed Action indicates a discussion of wetlands mitigation measures needed for the Proposed Action is not warranted.

Discussion of Alternatives

Proposed Action

A discussion of wetland mitigation measures needed for the Proposed Action is not warranted because there no wetland areas were discovered at or in the vicinity of the Proposed Action.

No Action Alternative

Under the No Action Alternative, wetland mitigation measures are unnecessary at the site because no wetland areas were discovered at or in the vicinity of the Proposed Action.

3.2.3 Threatened and Endangered Species

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the site was evaluated for the potential occurrences of threatened and endangered (T&E) species. The ESA of 1973 requires any federal agency that funds, authorizes or carries out an action to ensure that their action is not likely to jeopardize the continued existence of any T&E species (including plant species) or result in the destruction or adverse modification of designated critical habitats.

The WTMJ transmitter site is currently used as a radio transmitter site and includes several radio towers and several buildings. The Proposed Action is located in an area within the WTMJ transmitter site that was previously vacant land, and the site is currently surrounded by vacant land. During a site visit on August 11, 2009, the site was vegetated with native grasses and weeds. No evidence of wetland or critical habitat was

identified in the vicinity of the Proposed Action during the August 11, 2009 site visit. Additionally, no T&E species were listed by the USFWS for Racine County.

Due to the absence of T&E species in Racine County, a discussion of T&E species mitigation measures needed for the Proposed Action is not warranted.

Discussion of Alternatives

Proposed Action

A discussion of T&E species mitigation measures needed for the Proposed Action is not warranted at this time because there are no T&E species identified in the vicinity of the Proposed Action.

No Action Alternative

Under the No Action Alternative, T&E species mitigation measures are unnecessary at the site because there are no T&E species in the vicinity of the Proposed Action.

3.3 Hazardous Materials

The existing UST system includes one single-walled, FRP, 5,000-gallon UST located northwest of the WTMJ transmitter building. The existing UST system was reportedly manufactured by Xerxes Corporation and installed in 1994. The existing UST system is equipped with an Auto Stik Jr. automatic tank gauging leak detection system. Leak detection observations are reportedly performed every Monday. The existing UST system provides diesel fuel to a 50-gallon day tank located in the generator room of the WTMJ transmitter building. The day tank is reportedly a single-walled, steel AST, manufactured by Tramont (model number: UTRS-50). The day tank is supplied via a supply pipe from the existing UST to a day tank transfer pump, and has one return pipe back to the existing UST. Existing underground piping is single-walled and constructed of FRP, while existing aboveground piping is single-walled carbon steel and flexible hoses. There is no leak detection system in place for the existing UST system's underground and aboveground piping. There is no fuel filtration system associated with this existing UST system.

FEMA submitted a request for project review for the Proposed Action asking WDOC to evaluate the possible impacts to waterways and necessary guidelines for the removal and replacement of a UST system. WDOC indicated that requirements and permitting information is available online at the WDOC website (http://www.commerce.state.wi.us/ER/ER-BST-HomePage.html). WDOC is the governing agency in the State of Wisconsin for removal and installation of UST systems.

Per the WDOC website, closure must be supervised by a Comm. 5 Certified Tank Remover/Cleaner. Notification must be given to a WDOC authorized agent (Local Program Operator [LPO]) 15 days prior to closure. The UST must be cleaned. All piping must be closed along with the UST. When required by Comm. 10, a site assessment by a Comm. 5 Certified Site Assessor in the form of a Tank System Service and Closure Assessment Report (TSSA report) (Form ERS-8951) must be completed and signed by the LPO (Commerce agent). Tank inventory (Form ERS-7437) must be completed and submitted to WDOC. Per the WDOC website, all components of WDOC Form ERS-6294 must be completed.

Discussion of Alternatives

Proposed Action

The Proposed Action addresses the need to upgrade the aging existing UST system at the WTMJ transmitter site. Under the Proposed Action, PEPAC proposes to upgrade the existing UST with a new 12,000-gallon, double-walled UST with automatic tank monitoring and leak protection equipment. The Proposed Action calls for replacement of the ancillary fuel system (piping, valves, day tank, and other ancillary equipment). Additionally, the Proposed Action includes curbing and sealing of concrete floors, joints, and walls below and around the proposed day tank in the generator room of the WTMJ transmitter building. These upgrades are needed to minimize the potential of impact to the human and natural environment from petroleum product releases from the aging existing UST system.

The Proposed Action is not being considered in response to a known UST leak, or a historic release of petroleum products from the UST system. However, excavation activities could expose or otherwise affect subsurface soils and groundwater in the vicinity of the existing UST system that have been impacted by petroleum wastes or materials. Any hazardous materials released to the subsurface soils and/or groundwater discovered during implementation of the Proposed Action shall be assessed and remediated in accordance with applicable local, state, and federal regulations. The Proposed Action provides a net benefit to the human and natural environment.

No Action Alternative

The existing UST system does not have complete leak detection and equipment installation safeguards. Under the No Action Alternative, the existing UST system would remain at the site, which would continue to pose a threat to the human and natural environment from the risk posed by a release or leak of petroleum products to the subsurface soils and groundwater in the vicinity of the existing UST system.

3.4 Socioeconomics

3.4.1 Zoning and Land Use

According to the Racine County Geographic Information System (GIS) website, the WTMJ transmitter site, as well as all of the surrounding properties, are currently zoned A-2, which is described as General Farming and Residential District II.

Discussion of Alternatives

Proposed Action

Because the Proposed Action involves only the upgrading of existing infrastructure in support of the WTMJ transmitter site's current activities, alteration of the site's zoning status is not anticipated to be necessary. No potential long-term or short-term effects to zoning and land use patterns would be anticipated under the Proposed Action.

No Action Alternative

Under the No Action Alternative, the zoning designation of the site would remain the same.

3.4.2 Visual Resources

The existing UST system is not in the viewshed of the general human population. The existing transmitter building cannot be observed from any nearby residential dwellings or roads.

Discussion of Alternatives

Proposed Action

The Proposed Action involves the installation of a new UST system as shown on Figure 3, Appendix A, which outlines the general layout of the Proposed Action in comparison to the existing site conditions. The viewshed of the surrounding vicinity will not be adversely impacted by the proposed upgrading activities.

No Action Alternative

Visual resources in the area would not be affected by implementation of the No Action Alternative.

3.4.3 Noise

Noise is defined herein as undesirable sound, and is federally regulated by the Noise Control Act (NCA) of 1972. Although the NCA of 1972 gives the USEPA authority to prepare guidelines for acceptable ambient noise levels, it only charges those federal agencies that operate noise-producing facilities or equipment to implement noise standards. The USEPA's guidelines, and those of many federal agencies, state that outdoor sound level in excess of 55 decibels (dB) are "normally acceptable" for noise-sensitive land uses such as residences, schools and hospitals.

The site is surrounded in all directions by vacant or agricultural land, which are areas not defined as sensitive receptors to noise. FEMA owns the existing UST system, and to date, has not received complaints from any sensitive noise receptors in the vicinity of the existing UST system.

Discussion of Alternatives

Proposed Action

During the construction activities of the Proposed Action, the most elevated noise levels would be from construction equipment. The use of construction equipment during the construction activities of the Proposed Action will be restricted to normal daytime hours to help mitigate negative noise effects to the site vicinity. After the new UST system installation is completed, noise would be limited to delivery trucks filling the UST with diesel fuel periodically. The Proposed Action has the potential to provide a net benefit to the area in reference to noise levels due to an upgrade in UST system equipment.

No Action Alternative

Current noise levels would not change by implementing the No Action Alternative. The short-term impacts to the ambient noise levels from the construction phase of the Proposed Action would be avoided.

3.4.4 Public Services and Utilities

Electrical and natural gas services are provided to the WTMJ transmitter site by We Energies. The Village of Union Grove Public Works Division manages the village's drinking water and wastewater utilities. The Yorkville/Union Grove Fire Department (700 Main Street, Union Grove) services the vicinity, and reportedly consists of three Engine Companies, one Ladder Company, one Heavy Rescue Division, one Water Tanker Unit, three Ambulance Units, one Central Command Unit, and one Safety Vehicle Company. The Village of Union Grove contracts the Racine County Sheriff's Department (717 Wisconsin Avenue, Racine), a 24-hour law enforcement agency, for its law enforcement needs. Memorial Hospital (252 McHenry Street, Burlington) is the nearest hospital to the WTMJ transmitter site, and is located approximately 9 miles northwest of the site.

The existing UST system and the Proposed Action do not increase or decrease the demand on the Village of Union Grove's public services and utilities. A representative of the Village of Union Grove's Fire Department is expected to be present during the removal of the existing UST system, as standard local protocol requires.

Discussion of Alternatives

Proposed Action

The Proposed Action does not increase or decrease the demand on the Village of Union Grove's public services and utilities; therefore, a discussion regarding its impacts is not warranted.

No Action Alternative

Public services and utilities in the area would not affected by implementation of the No Action Alternative.

3.4.5 Traffic and Circulation

The WTMJ transmitter site is surrounded in all directions by agricultural and vacant land. The only means of entering the WTMJ transmitter site is through Church Road, which is located north of the site. The Village of Union Grove maintains the roads in the vicinity of the site. At the time of the site visit on August 11, 2009, Church Road was an asphalt-paved two-lane road. The Village of Union Grove does not keep a daily average traffic count for Church Road. Additionally, bus routes are not available on Church Road.

Discussion of Alternatives

Proposed Action

Traffic on Church Road would increase slightly during the construction phase of the Proposed Action. The construction activities would be limited to regular daytime working hours. After the Proposed Action was constructed, traffic patterns and volumes would resume to their normal pre-construction levels.

No Action Alternative

Under the No Action Alternative, the short-term impacts to traffic patterns and volumes from the construction phase of the Proposed Action would be avoided.

3.4.6 Environmental Justice (EO 12898)

In February 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 CFR 7629), was issued. This EO directs Federal agencies to incorporate environmental justice as part of their missions. Federal agencies are specifically directed to identify and, as appropriate, to address any disproportionately high and adverse human health or environmental effects resulting from their programs, policies, and activities on minority populations and low-income populations.

Census data is complied at a variety of levels corresponding to geographic areas. In order of decreasing size, the areas used are states, counties, census tracts, block groups, and blocks. A block group is a subdivision of a census tract and is the smallest geographic unit for which the Census Bureau tabulates sample data. A block group consists of all the blocks within a census tract with the same beginning number.

The US Census Bureau estimated the population of the Village of Union Grove to be 4,322 during the 2000 Census. The median value of owner-occupied homes as of the 2000 Census was reportedly $124,700 compared to a nationwide median of $119,600. The estimated median household income in the Village of Union Grove as of the 2000 Census was reportedly $50,636 compared to a nationwide median of $41,994. The Village of Union Grove's labor force as of the 2000 Census was reportedly 73.2% of the total municipal population compared to 63.9% of the nationwide population.

The 2000 Census indicated that 97.2% of individuals in the Village of Union Grove reported being White. The largest minority group, Hispanic or Latino, reportedly accounted for 2.4% of the Village of Union Grove's population. The 2000 census indicated that the overall poverty rate for individuals in the Village of Union Grove was reportedly 5.4%, compared to 12.4% nationwidewide.

Due to the lack of substantial minority populations in the block group data for the Village of Union Grove, demographic maps were not prepared and analyzed for this EA. In compliance with FEMA's policy implementing EO 12898, *Environmental Justice*, the socioeconomic conditions of the Village of Union Grove have been reviewed and do not appear to have a disproportionately high or adverse impact on minority or low-income populations.

Discussion of Alternatives

Proposed Action

The socioeconomic conditions of the Village of Union Grove have been reviewed and do not appear to have a disproportionately high or adverse impact on minority or low-income populations.

No Action Alternative

Under the No Action Alternative, the impact on socioeconomic groups would remain the same.

3.4.7 Safety and Security

UST systems have environmental, safety, and health hazards associated with them. The environmental damage caused by a spill of petroleum products creates a safety concern to the human and the natural environment. Petroleum is a highly flammable substance. Explosions and fires at UST system locations have occurred in the past. For the Proposed Action, there are several hypothetical accident scenarios including: 1) removal of the existing UST system, 2) failure of the new UST system, and 3) improper unloading operations for transfer of diesel fuel between the tank truck and the UST fill port.

Failure of the new UST system is the least likely of the three scenarios to occur and not expected to create an explosion or fire. A failure of the new aboveground piping could occur causing an explosion or fire; however, the new UST system is designed to provide more protection with the installation of double-walled piping.

A release or spill of diesel fuel as part of unloading fuel from the tank truck to the new UST fill port is possible due to human error. Various safety measures will be installed to help limit the potential of a release or spill as part of unloading operations including equipment, overfill monitoring, high level audio alarm and acknowledgement button, and signage with various unloading operation requirements and procedures posted in the vicinity of the new UST system.

For closure and removal of the existing UST system, various procedures and operations will be used to limit the potential of an explosion or fire including inerting the UST, monitoring air space for combustible gases, and specific local/state procedures for removing the existing UST system.

The existing UST and fuel piping system are deemed to be aging equipment. Currently, if any of the three hypothetical accident scenarios posed in the paragraphs above were to occur, diesel fuel would be released directly to the environment via the groundwater and/or soil.

Discussion of Alternatives

Proposed Action

The proposed UST system to replace the existing UST system includes environmental safeguards to help minimize potential releases or spills to the environment. These safeguards include double-walled construction, automatic leak detection, and secondary containment for piping and other equipment. The inclusion of these safeguards helps provide a positive effect to the site vicinity and will reduce the potential for releases and spills of dangerous substances to the human and natural environment.

Additionally, to help minimize risks to safety and human health, construction activities will be performed using qualified personnel trained in the proper use of the appropriate equipment including appropriate safety precautions. Additionally, activities would be conducted in a safe manner in accordance with the standards specified in Occupational Safety and Health Act (OSHA) regulations.

No Action Alternative

Under the No Action Alternative, the safety concerns associated with construction activities would not be an issue. The leak detection system and prevention features of the Proposed Action would not be installed. The existing UST system would remain in

place, increasing the potential for a release or spill of petroleum products to the human and natural environment.

3.5 Historic and Cultural Resources

In addition to review under NEPA, consideration of effects to historic properties is mandated under Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800. Requirements include identification of significant historic properties that may be affected by the Proposed Action. As defined by 36 CFR 800.16(1)(1), historic property means any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."

As defined in 36 CFR Part 800.16(d), the Area of Potential Effect (APE) "...is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist." The APE for the Proposed Action has been defined as a ½ mile radius circling the Proposed Action.

In addition to identifying historic properties that may exist in the Proposed Action's APE, FEMA must also determine, in consultation with the appropriate State Historic Preservation Office (SHPO), what effect, if any, the action will have on historic properties. Moreover, if the project would have an adverse effect on these properties, FEMA must consult with SHPO on ways to avoid, minimize, or mitigate the adverse effect.

During the ground-disturbing activities of the Proposed Action, the excavation activities will be monitored, and if any artifacts or human remains are found during the excavation process, all work will cease and the applicant will notify the Grantee who will notify FEMA and the SHPO/Tribal Historic Preservation Office (THPO).

3.5.1 Historic Structures

A search was conducted on the Wisconsin Historical Society's online database for records and surveys of historic and cultural resources within the APE of the Proposed Action. The initial database search identified 47 historic places located within the Village of Union Grove. In some instances, specific addresses for the historic places were not available. Terracon and FEMA have concluded that the identified historic places are not within viewshed of the Proposed Action and, therefore, do not adversely impact these properties.

A letter was sent to the SHPO for the State of Wisconsin on October 2, 2009 requesting review of the site diagrams and the site's location relative to identified historic places, in order to determine the potential the Proposed Action has to adversely impact historic properties. The Wisconsin Historical Society (SHPO) indicated, by letter, that no historic properties will be affected by the Proposed Action. Copies of the SHPO correspondence are included in Appendix C.

Discussion of Alternatives

Proposed Action

During the ground-disturbing activities of the Proposed Action, the excavation activity will be monitored. If any artifacts or human remains are observed or found during the excavation process, all work will cease and PEPAC will notify FEMA and the SHPO/THPO. Based on information provided by the Wisconsin Historical Society, no historic properties will be impacted by the Proposed Action.

No Action Alternative

Under the No Action Alternative, historical properties protection measures would be unnecessary at the location of the Proposed Action because there would be no impact to these historic properties.

3.5.2 Archeological Resources

A search of databases provided online by the Wisconsin Historical Society identified no known archeological resources located within the Village of Union Grove. A letter was sent to the SHPO for the State of Wisconsin on October 2, 2009 requesting his concurrence of no effect on archeological resources within the APE of the Proposed Action. The SHPO indicated, by letter, that archaeological resources will not be affected by the Proposed Action. Copies of the SHPO correspondence are included in Appendix C.

Discussion of Alternatives

Proposed Action

During the ground-disturbing activities of the Proposed Action, the excavation activity will be monitored. If any artifacts or human remains are observed or found during the excavation process, all work will cease and PEPAC will notify FEMA and the SHPO/THPO. Based on information provided by the Wisconsin Historical Society, archaeological resources will not be impacted by the Proposed Action.

No Action Alternative

Under the No Action Alternative, archaeological resources protection measures would be unnecessary at the location of the Proposed Action because there would be no soil disturbing activities.

3.5.3 Tribal Coordination and Religious Sites

On November 6, 2000, EO 13175, *Consultation and Coordination with Indian Tribal Governments,* was issued. The EO directs federal agencies "...to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes..."

In accordance with the Native American Grave Protection and Repatriation Act, requests for evaluation of the presence or absence of known archeological and Indian Religious sites within the vicinity of the Proposed Action were submitted to the following federally recognized tribal groups that indicated interest in projects in the vicinity of the Proposed Action:

- Lower Brule Sioux Tribe
- Winnebago Tribe of Nebraska

- Prairie Band Potawatomi Nation
- Kickapoo Tribe of Oklahoma
- Sac and Fox Nation of Oklahoma
- Sac and Fox Tribe of the Mississippi in Iowa
- Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin
- Keeweenaw Bay Indian Community
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Upper Sioux Community of Minnesota
- Forest County Potawatomi Community of Wisconsin
- Ho-Chunk Nation
- Sokaogon Chippewa Community
- Miami Tribe of Oklahoma
- Ottawa Tribe of Oklahoma
- Shawnee Tribe
- Chippewa Creek Tribe of the Rocky Boy's Reservation
- Menominee Indian Tribe of Wisconsin
- Mille Lacs Band of Ojibwe Indians
- Turtle Mountain Band of Chippewa

Letters were sent requesting comments on October 2, 2009. At the issuance of this EA, no responses from tribes have been received. Per NEPA standards, Indian tribes have 30 days to respond to initial letters. After 30 days have passed, it is assumed the Indian tribes contacted have no interest in the Proposed Action. Copies of the tribal comment letters are included in Appendix C.

Discussion of Alternatives

Proposed Action

During the ground-disturbing activities of the Proposed Action, the excavation activity will be monitored. If any artifacts or human remains are observed or found during the excavation process, all work will cease and appropriate THPOs will be notified. Based on the absence of responses following a 30 day response deadline, no tribal resources will be impacted by the Proposed Action.

No Action Alternative

Under the No Action Alternative, Indian tribes would not need to be contacted or consulted.

3.6 Comparison of Alternatives

The following table summarizes and compares the potential impacts that could result from the Proposed Action and the No Action Alternative.

Potential Impacts

Affected Environment	Proposed Action	No Action Alternative	Mitigation Measures / Best Management Practices (BMPs)
Geology, Seismicity, and Soils	Short-term effects during construction phase for fugitive dust and soil erosion.	No effects	Excavated soil stockpiled on site should be covered to prevent fugitive dust. A Tank System Site Assessment will be performed in accordance with Wisconsin Department of Commerce Chapter 10 COMM 10 requirements.
Water Resources and Water Quality	Net benefit to the site watershed by upgrading the UST system. Proposed Action would reduce the potential for a petroleum products release or spill to the environment.	The current fuel piping system is single-walled and does not have a leak detection system, which increases the potential that impacts to the subsurface soils and groundwater at the site.	Follow local, state, and federal UST removal and installation procedures.
Affected Environment	**Proposed Action**	**No Action Alternative**	**Mitigation Measures / Best Management Practices (BMPs)**
Floodplain Management	Site is not located in a floodplain.		
Air Quality	Short-term effects during construction phase from construction equipment emissions, and from construction activities releasing particulate matter. Net benefit in more efficient equipment on-site.	Emissions from the operation of the on-site equipment would remain out-of-date and thus less efficient.	To reduce impacts due to fugitive dust, the site should be watered down, as necessary.

Terrestrial and Aquatic Environment	Net benefit to the site vicinity by upgrading the UST system. Proposed Action would reduce the potential for a petroleum products release or spill to the environment.	The current fuel piping system is single-walled and does not have a leak detection system, which increases the potential that impacts to the subsurface soils and groundwater at the site.	
Wetlands	Site is not located in a wetland.		
Threatened and Endangered Species	No effects	No effects	No T&E Species are listed by USFWS in Racine County.
Hazardous Materials	Net benefit to the site vicinity by upgrading the UST system. Proposed Action would reduce the potential for a petroleum products release or spill to the environment.	The current fuel piping system is single-walled and does not have a leak detection system, which increases the potential that impacts to the subsurface soils and groundwater at the site.	Follow local, state, and federal removal procedures.
Zoning and Land Use	No effects	No effects	None
Visual Resources	No effects	No effects	None

Affected Environment	Proposed Action	No Action Alternative	Mitigation Measures / Best Management Practices (BMPs)
Noise	Short-term effects during construction phase from construction equipment.	Noise from the operation of the on-site equipment would remain out-of-date and thus create more noise.	Only run equipment when necessary.
Public Services and Utilities	No effects	No effects	A representative of the Village of Union Gove's Fire Department must be present on site during removal of existing UST.
Traffic and Circulation	Traffic on Church Road would increase slightly during construction phase.	No effects	Construction activities only during daytime hours.
Environmental Justice	No effects	No effects	None
Safety and Security	Safety concerns associated with worker safety during construction phase. Positive effect to the site with new leak detection safeguards will reduce the potential for release and spills of dangerous substances to the human and natural environment.	The safety concerns associated with construction activities would be eliminated. The existing UST system would remain in place, potentially increasing the potential for releases and spills of hazardous materials to the human and natural environment.	Follow local, state, and federal removal procedures.
Historic Structures	No effects	No effects	None
Archeological Resources	No effects	No effects	None
Tribal and Religious Sites	No effects	No effects	None

4.0 CUMULATIVE IMPACTS

The area surrounding the WTMJ transmitter site is currently agricultural and vacant land. The Proposed Action entails the replacement and upgrade of existing fueling equipment; therefore, contributions of the Proposed Action to cumulative impacts in the area would be minimal.

5.0 PUBLIC PARTICIPATION

Pending review and approval of the EA by FEMA, the EA will be made available for public review at the local Union Grove Public Library and on the FEMA website for a period of 30 days. Comments received from the public review period, if any, will be incorporated and addressed into the EA document.

6.0 MITIGATION MEASURES AND PERMITS

A UST closure permit, a UST installation permit, and an electrical permit will be needed for the Proposed Action.

No mitigation measures are required.

7.0 CONSULTATIONS AND REFERENCES

Please see Appendix B and Appendix C for copies of all correspondence conducted for this EA.

8.0 LIST OF PREPARERS

Please see Appendix D for resumes of preparers and reviewers of this EA.